REMARKS

The Office Action dated November 16, 2006, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 12-37 are currently pending in the application, of which claims 12, 24, and 27-37 are independent claims. Claims 12-36 have been amended, and claim 37 has been added, to more particularly point out and distinctly claim the invention. No new matter has been added. Claims 12-37 are respectfully submitted for consideration.

Claims 12, 24, and 27-36 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with written description requirement, in that these claims allegedly contain subject matter that was not sufficiently described in the specification to show possession of the invention. Applicants respectfully traverse this rejection.

Specifically, the Office Action cited the claim language "right bit or symbol decision" as recited in line 6 of claim 12. The Office Action notes that Applicants, in an appeal brief that was previously filed in the prosecution of the present application, identified various portions of the specification. The Office Action asserted that those portions only disclose the term "right decision." Applicants respectfully disagree with the Office Action's analysis.

Section 112 of the Patent Act states that the "specification shall contain a written description of the invention." 35 U.S.C. §112. The Federal Circuit has held that "[t]o fulfill the written description requirement, the patent specification must describe an

invention in sufficient detail that one skilled in the art can clearly conclude that the inventor invented what is claimed." *Cordis Corp. v. Medtronic AVE, Inc.*, 339 F.3d 1352, 1364, 67 USPQ2d 1876, 1885 (Fed. Cir. 2003). The Federal Circuit has explained, however, that "[t]he disclosure as originally filed does not ... have to provide *in haec verba* support for the claimed subject matter at issue." *Id. See additionally, Kao Corp. v. Unilever United States, Inc.*, 78 USPQ2d 1257, 1260 (Fed. Circ. March 21, 2006).

In other words, there is no requirement that the precise language used in the claims appear in the specification, in order to satisfy the written description requirement. The concept claimed is fully supported in the specification, in such a way that one of ordinary skill in the art could clearly conclude that the inventor invented what is claimed. Therefore, the claims fully comply with the written description requirement.

For example, at page 3, lines 12-16, the specification states: "The invention is based on the detection of events called pseudo errors. In this context, "pseudo error" refers to a decision-making instant when a bit or symbol error nearly occurred, i.e. to instants when the right decision was actually made but the margin for the right decision was smaller than a certain limit value so that an actual error was a close thing."

From the passage at page 3, lines 12-16, one of ordinary skill in the art would realize that the "right decision" refers to a decision regarding a "bit or symbol" which, if not right, would have resulted in "a bit or symbol error." Thus, one of ordinary skill in the art would recognize that the inventors possessed "right bit or symbol decision" even though that particular phrase does not appear in the passage from the specification quoted

above. Accordingly, for at least this reason, Applicants respectfully submit that the Office Action's position lacks merit, and respectfully request the withdrawal of the rejection.

The Office Action requested, at item 4, review of all the claims in order to ensure that all the claims comply with the written description requirement. Applicants have reviewed the claims and respectfully submit that the claims each fully comply with the written description requirement. Applicants respectfully point out that, if the USPTO disagrees, it is the USPTO's burden to establish lack of possession or any other lack of compliance with the statutory requirements. Applicants' position, however, is that the claims fully comply with all relevant statutory provisions, and that, accordingly, the claims should be allowed, and the application should be passed to issue.

Claims 12, 24, and 27-36 were also rejected under 35 U.S.C. 112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the invention. This rejection is based on the same claim language as the rejection that alleged lack of proper written description, namely "pseudo error defining an instant when a right bit or symbol decision was made ...." Applicants respectfully disagree with the Office Action's analysis and traverse the rejection.

The Office Action's analysis was that "the claims include said limitation that is rendered indefinite as supported by the instant application as originally filed." This rationale makes no sense grammatically or legally. Applicants respectfully submit that, as best understood, the Office Action is making the same objection as above, namely that

there is allegedly no description of the claim limitation in the specification as originally filed. Accordingly, Applicants respectfully submit that the explanation above fully answers the Office Action's mistaken conclusion that the claim terminology is not supported by the specification. If a different meaning was intended by the language of the rejection, clarification is respectfully requested.

Furthermore, the Office Action argues that the term "nearly" in the specification is a relative term, that what constitutes a "right decision" is not defined in the specification, that what constitutes an "actual error" is not defined in the specification, and that what constitutes a "close thing" is not defined in the specification. Applicants strongly disagree with the Office Action's conclusions.

MPEP 2173.05(b) explains that relative terminology, while it may not be precise, does not automatically render a claim indefinite under 35 U.S.C. 112, second paragraph, citing *Seattle Box Co., v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 221 USPQ 568 (Fed. Cir. 1984). The MPEP continues by explaining that acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed, in light of the specification.

The MPEP, at section 2173.05(b), concludes that, "when a term of degree is presented in a claim, first a determination is to be made as to whether the specification provides some standard for measuring that degree. If it does not, a determination is made as to whether one of ordinary skill in the art, in view of the prior art and the status of the art, would be nevertheless reasonably apprised of the scope of the invention." The Office

Action has not made either of these determinations, and one of ordinary skill, reading the claim term "pseudo error" in view of the specification would be reasonably appraised of the scope of the invention.

For example, the specification clarifies what is meant by nearly immediately by stating, at page 3, lines 14-16, "i.e. to instants when the right decision was actually made but the margin for the right decision was smaller than a certain limit value so that an actual error was a close thing." Accordingly, Applicants respectfully submit that the use of "nearly" (in the specification) does not render the claims indefinite.

Likewise, "close thing" (to which the Office Action objected) is clearly, contextually explained as "the margin for the right decision was smaller than a certain limit value." Accordingly, Applicants respectfully submit that the use of "close thing" (in the specification) does not render the claims indefinite.

As to "right decision" and "actual error," Applicants respectfully submit that the terms are sufficiently clear on their face that no further definition in the specification is required. One of ordinary skill in the art would understand that "right decision" refers to a situation in which the decision made is correct. Thus, if a system decides that a bit or symbol is "x" and it is actually is "x," the system has made the "right decision," but if it decides that the bit or symbol is "not x" when it actually is "x" then the system has not made the right decision, but has – instead – made an "actual error."

Accordingly, Applicants respectfully submit that the use of the terms "right decision" and "actual error" do not render the claims indefinite.

The Office Action stated, at item 6, that it requests review of all the claims in order to ensure that all the claims comply with the definiteness requirement. Applicants have reviewed the claims and submit that the claims all fully comply with the definiteness requirement. Applicants respectfully submit that, if the USPTO disagrees, it is the burden of the USPTO to establish non-compliance with the statutory requirements (including the definiteness requirement).

All of the presently pending claims were rejected on the basis of alleged prior art, and the rejections are essentially the same as those thoroughly rebutted in the appeal brief filed by Applicants on May 1, 2006. The entirety of the Office Action's response to the arguments set forth in the Appeal brief is found on page 24 of the Office Action, item 9, which states: "Applicant's arguments filed 01 May 2006 have been fully considered but they are not persuasive. Examiner respectfully disagrees with applicant's [sic] arguments as the applied reference(s) [sic] provide more than adequate support and to further clarify (see the above claims and comments in this section)." This response does not meet the requirements set forth for maintaining a rejection. All this response does is state disagreement.

MPEP 707.07(f) sets forth the Examiner's obligation to answer all material traversed. Specifically MPEP 707.07(f) states that "the examiner should, if he or she repeats the rejection, take note of the applicant's argument **and answer the substance of it.**" (Emphasis added.) It is essential that the Office Action address each of the arguments presented by Applicant, so that meaningful appellate review is possible. The

Office Action, however, does not answer the substance of Applicants' arguments. Accordingly, if the rejection is again maintained, a response to the substance of the arguments is respectfully requested. Applicants respectfully request that any such rejection be in the form of a new **Non-Final** Office Action.

Claims 12-17, 19, 23-24, 27-34, and 36 were rejected under 35 U.S.C. 102(b) as being anticipated by EP0847146 of Endo et al. ("Endo"). Applicants respectfully traverse this rejection.

Claim 12, upon which claims 13-23 depend is directed to a method including transmitting a digital signal from a transmitting end to a receiving end of a radio system. The method also includes receiving said digital signal at the receiving end. The method further includes setting an initial value of the transmission power so that no pseudo errors are detected, wherein a pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur. The method additionally includes monitoring pseudo error occurrence in the received signal at the receiving end. The method also includes decreasing the transmission power gradually from the initial value at the transmission end when the pseudo error occurrence in an error-free reception does not fulfill a predetermined condition. The method further includes increasing the transmission power by a predetermined amount when the pseudo error occurrence in the error-free reception fulfills the predetermined condition.

Claim 24, upon which claims 25-26 depend, is directed to a radio system. The radio system includes, at a receiving end, a first unit configured to monitor pseudo error occurrence in a received signal and to produce a control signal indicating when pseudo errors are detected and when the pseudo error occurrence in an error-free reception is below a predetermined condition, wherein a pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur. The radio system also includes, at a transmitting end, a second unit configured to adjust transmission power responsive to said control signal by decreasing the transmission power when the pseudo error occurrence in the error-free reception does not fulfill the predetermined condition and by increasing the transmission power when the pseudo error occurrence fulfills the predetermined condition.

Claim 27 is directed to a radio receiver, configured to monitor pseudo error occurrence in a received signal. The radio receiver is also configured to produce a control signal indicating when pseudo errors are detected and when the pseudo error occurrence in an error-free reception is below a predetermined condition. A pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur.

Claim 28 is directed to a radio transmitter configured to adjust transmission power responsive to a control signal. The control signal is configured to indicate when pseudo

errors are detected in a receiver and when pseudo error occurrence in the receiver is below a predetermined condition for an error-free reception. A pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur. The radio transmitter is configured to adjust transmission power by decreasing the transmission power when the pseudo error occurrence does not fulfill the predetermined condition and by increasing the transmission power when the pseudo error occurrence fulfills the predetermined condition.

Claim 29 is directed to a control unit configured to set an initial value of transmission power so that no pseudo errors are detected in a received signal in a receiving end of a radio link system. A pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur. The control unit is also configured to adjust the transmission power responsive to a power control message received in the control unit by decreasing the transmission power when pseudo error occurrence in an error-free reception does not fulfill a predetermined condition and by increasing the transmission power when the pseudo error occurrence fulfills the predetermined condition, wherein the power control message is based on information on pseudo errors detected in the received signal in the receiving end and provides indication whether pseudo error occurrence in an error-free reception fulfills the predetermined condition.

Claim 30 is directed to a control unit configured to produce and send a power control message based on information on pseudo errors detected in a received signal and indicating whether pseudo error occurrence in an error-free reception fulfills a predetermined condition. A pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur.

Claim 31 is directed to a computer program, embodied on a computer readable medium. The computer program controls a computing system to perform setting an initial value of transmission power so that no pseudo errors are detected in a received signal in a receiving end of the radio link system. A pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur. The computer program also controls a computing system to perform adjusting the transmission power responsive to a power control message by decreasing the transmission power when pseudo error occurrence in an error-free reception does not fulfill a predetermined condition and by increasing the transmission power when the pseudo error occurrence fulfills the predetermined condition. The power control message is based on information on pseudo errors detected in the received signal in the receiving end and provides indication whether pseudo error occurrence in an error-free reception fulfills the predetermined condition.

Claim 32 is directed to a computer program, embodied on a computer readable medium. The computer program controls a computing system to perform producing a power control message based on information on pseudo errors detected in a received signal and indicating whether pseudo error occurrence in an error-free reception fulfills a predetermined condition. A pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur.

Claim 33 is directed to a method including sending a digital signal. The method also includes setting an initial value of transmission power so that no pseudo errors are detected in a received signal in a receiving end of a radio link system, wherein a pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur. The method further includes receiving a power control message, which is based on information on pseudo errors detected in the received signal in the receiving end and indicating whether pseudo error occurrence in an error-free reception is below a predetermined condition. The method additionally includes decreasing the transmission power from the initial value when the pseudo error occurrence in the error-free reception does not fulfill the predetermined condition. The method also includes increasing the transmission power when the pseudo error occurrence fulfills the predetermined condition.

Claim 34 is directed to a method including receiving a digital signal. The method also includes monitoring pseudo error occurrence in the received signal. A pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur. The method further includes producing a power control message based on information on pseudo errors detected in the received signal and indicating whether pseudo error occurrence in an error-free reception fulfills a predetermined condition. The method additionally includes sending the power control message to a transmitting end of a radio link system.

Claim 36 is directed to a method including transmitting a digital signal from a transmitting end to a receiving end of a radio system. The method also includes receiving said digital signal at the receiving end. The method further includes setting an initial value of the transmission power so that no pseudo errors are detected. A pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur. The method additionally includes monitoring pseudo error occurrence in the received signal at the receiving end. The method also includes decreasing the transmission power gradually from the initial value at the transmission end when the pseudo error occurrence in an error-free reception does not fulfill a predetermined condition. Method further includes increasing the transmission power by a predetermined amount when the pseudo error occurrence in the error-free reception

fulfills the predetermined condition. The method additionally includes monitoring occurrence of actual errors in the received signal at the receiving end. The method also includes overriding transmission power control based on monitoring of occurrence of pseudo errors by increasing transmission power when actual errors are observed.

Applicants respectfully submit that the cited reference, Endo, fails to disclose or suggest all of the elements of any of the presently pending claims.

Specifically, Applicants respectfully submit that Endo does not teach the claimed "pseudo-errors," and because Endo cannot provide the critical and unobvious advantages that certain embodiments of the present invention can provide.

As outlined in MPEP 2131, in order for a reference to anticipate a claim, the reference must teach every element of the claim. A claim is only anticipated if each and every element of the claim is described, either inherently or expressly, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628 (Fed. Cir. 1987).

As discussed in the specification at page 9, lines 4-8, examples of the present invention enable the control of transmission power to be based on detecting pseudo errors in the transmission. Thus, situations are identified that are estimated as an error that nearly happened, but did not. For example, an error-free reception is provided that is monitored for pseudo error occurrence in the received signal. The pseudo error defines an instant when a right bit or symbol decision is made, but a margin for the right bit or symbol is smaller than a limit value so that an actual error nearly occurred. An actual

error, however, did not occur. Additionally, as mentioned at page 10, lines 23-32 of the present specification, certain embodiments of the present invention can be implemented at a low cost. It is respectfully submitted that the cited reference of Endo fails to disclose or suggest all the elements of any of the presently pending claims. Therefore, Endo fails to provide the critical and unobvious advantages discussed above.

As discussed in previous responses, Endo relates to a transmission power control apparatus for a mobile communication system. Endo describes providing a reverse channel error rate judgment section in a radio base station for judging a communication quality of the reverse channel by a detected reverse channel frame error rate. Referring to Figure 1 of Endo, decoder section 105 performs data error detection in a receiving signal digitized by the digital demodulation section 101, and outputs the result of detected errors to reverse channel error rate judgment section 103. Endo describes, if a report is received indicating a frame error rate of the forward channel being unfavorable, then the transmission power of the forward channel is to be increased. If the report indicates a frame error rate report being too favorable, then the transmission power of the forward channel is decreased to reduce interference.

For example, claim 12 recites "setting an initial value of the transmission power so that no pseudo errors are detected, wherein a pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur." Applicants

respectfully submit that Endo does not disclose or suggest at least this feature of the claimed invention.

The Office Action took the position that Endo discloses this feature at "column 13, lines 13 [sic], lines 2-18; column 13, line 38 - column 15, line 13; Figs. 3 "ref. 305", 4 "ref. 407, 408", 5-6), where the power is adjusted to a favorable level without errors." Applicants respectfully disagree with the Office Action's characterization.

The Office Action's analysis is mistaken for several reasons. First, the feature recites that an "**initial value**" is set "so that no pseudo errors are detected." However, Endo, in the passages and Figures cited deals with adjusting transmission power based on a reported or observed frame error rate, as may be seen, for example, from column 13, lines 4-8 and 38-39, as well as Figure 3, element 301, Figure 4, element 402, Figure 5, element 501, Figure 6, element 602, and Figure 7, element 701. Accordingly, Endo does not and cannot address an "**initial value**" but only a modified value.

Moreover, the Office Action is mistaken in asserting that Endo's reported or observed frame error rate corresponds with the claimed "pseudo error" and thus Endo does not disclose or suggest that an "initial value" is set "so that no **pseudo errors** are detected." Endo addresses only actual errors and not pseudo errors.

A previous Office Action had responded to this deficiency of Endo by asserting that Endo's "setting a field strength" reads on the claimed "initial value" and that Endo's framer error rate corresponds with the claimed "pseudo errors," citing the same previously mentioned passages of Endo.

Applicants have already pointed out that whatever value is set by Endo is not an initial value, because Endo has already made observation and/or report as to frame error rate, which implies that the initial value is going to be modified by Endo to adjust the frame error rate. Additionally, Endo's frame error rate does not correspond to the claimed "pseudo errors."

Claim terms are to be read in the context of the particular claim, as well is in the context of the entire patent application, including the specification. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1313, 75 USPQ2d 1321, 1326 (Fed. Cir. 2005) (en banc). Moreover, patent applicants like Applicants are entitled to be their own lexicographer, and when the specification reveals a special definition given to a claim term, the inventors' lexicography governs. *Id.* at 1329. *See also CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366, 62 USPQ2d 1658, 1662 (Fed Cir. 2002).

Applicants have made it very clear that actual errors and pseudo errors are two different things. Claim 12, for example, explains that "a pseudo error is defined as an instant when a right bit or symbol decision was made, but a margin for the right bit or symbol decision was smaller than a limit value so that an actual error did not occur." Similar language is found in the present specification at page 3, lines 12-24. The Office Action – in essence – ignores this definition and equates pseudo errors with actual errors. The frame error rate of Endo is an actual error rate. This fact remains undisputed by the Office Action. Indeed, the Office Action provided no response to this fact.

Accordingly, Applicants respectfully submit that the Office Action's claim construction is unreasonable, and legally erroneous because it fails to accord proper deference to the inventors' lexicography. As MPEP 2111.01 (III) indicates, "An applicant is **entitled** to be his or her own lexicographer." (emphasis added) The Office Action's approach of ignoring applicant's explanation of the claim term unfairly destroys this entitlement.

Moreover, claim 12 recites "monitoring **pseudo error occurrence** in the received signal at the receiving end." Because Endo does not address pseudo errors, Endo also does not monitor pseudo error occurrence. The Office Action took the position that this feature is disclosed by Endo at column 11, lines 23-30, column 12, lines 2-6, and Figures 3-6. However, as noted above in those passages, Endo does not address pseudo errors or "pseudo error occurrence" but rather actual error occurrence, namely framer error rate, as can be seen at column 11, lines 26-28 and column 12, lines 2-4, as well as Figure 3, element 301, Figure 4, elements 402 (data error) and 407 (frame error rate), Figure 5, element 501, and Figure 6, elements 602 (data error) and 612 (frame error rate). Accordingly, Applicants respectfully submit that Endo also does not disclose or suggest at least "monitoring **pseudo error occurrence** in the received signal at the receiving end."

Additionally, claim 12 recites "decreasing the transmission power gradually from the initial value at the transmission end when the **pseudo error occurrence** in an error-free reception does not fulfill a predetermined condition." Because Endo does not

address pseudo errors or pseudo error occurrence, as discussed above, Endo does not and cannot disclose or suggest this feature of claim 12. The Office Action took the position that Endo discloses this feature at column 12, line 56 to column 13, line 41, Figure 3, Figure 4, element 411, Figure 5, and Figure 6, element 616. Applicants respectfully disagree with the Office Action's mistaken mischaracterization of Endo.

Endo does discuss decreasing transmission power (*See, for example,* Figure 6, element 616), but does not discuss doing so "gradually from the initial value at the transmission end when the **pseudo error occurrence** in an error-free reception does not fulfill a predetermined condition." The Office Action essentially ignores this aspect of the limitation. As explained above, Endo does not anywhere discuss pseudo error occurrence. As noted above, the kind of error occurrence that Endo addresses is actual error occurrence in the form of frame error rate.

A previous Office Action had responded to this argument by asserting that the cited portions show the power being decreased. As has just been explained, however, Endo decreasing a power level is not sufficient to disclose or suggest the entire feature: "decreasing the transmission power gradually from the initial value at the transmission end when the pseudo error occurrence in an error-free reception does not fulfill a predetermined condition." (The portion of the feature that the Office Action fails to address has been underlined for emphasis.)

Likewise, claim 12 recites "increasing the transmission power by a predetermined amount when the **pseudo error occurrence** in the error-free reception fulfills the

predetermined condition." Just as Endo does not disclose or suggest decreasing the transmission power when a pseudo error occurrence in an error-free reception does not fulfill a predetermined condition, so also, Endo does not disclose or suggest increasing the transmission power when a pseudo error occurrence in an error-free reception fulfills a predetermined condition.

The Office Action took the position that this feature is disclosed at column 12, line 56, to column 13, line 38, column 15, line 57 to column 16, line 4, Figure 3, Figure 4, element 410, Figure 5, and Figure 6. Applicants respectfully disagree with the Office Action's analysis.

As explained above, Endo does not address whether a pseudo error occurrence fulfills a predetermined condition, and accordingly, Endo does not disclose or suggest "increasing the transmission power by a predetermined amount when the **pseudo error occurrence** in the error-free reception fulfills the predetermined condition."

The Office Action responded by asserting that Endo does teach this feature, because Endo discloses increasing the transmission power "where an error is detected." Applicants respectfully note that "an error" does not read on the claimed "pseudo error." Accordingly, Applicants request that the rejection of claim 12 be withdrawn.

Claims 24, 27-34, and 36 each have their own scope, but each recite features related to "pseudo error." As explained in detail in the Appeal Brief filed May 1, 2006, each of these rejections is also in error and should be withdrawn. Indeed, because the Office Action does not present any reason for rejecting Applicants' explanation of the

distinctions of Endo compared with the claims, Applicants respectfully submit that it is unreasonable for the rejection of claims 24, 27-34 and 36 to be maintained.

Claims 13-17, 19, and 23 depend from, and further limit, claim 12. Therefore, it is respectfully submitted that each of claims 13-17, 19, and 23 recites subject matter that is neither disclosed nor suggested by Endo. It is, thus, respectfully requested that the rejection of claims 13-17, 19, and 23 be withdrawn.

Claims 18 and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Endo in view of U.S. Patent No. 5,873,028 of Nakano et al. ("Nakano"). The Office Action took the position that Endo discloses all of the features of the claims except "wherein a predetermined step is 1 dB" and "wherein the predetermined amount for increasing the transmission power is 1 or 2 dB." The Office Action cited Nakano to remedy these deficiencies of Endo. Applicants respectfully traverse this rejection.

Claims 18 and 20 depend from and further limit claim 12. The deficiencies of Endo with regard to claim 12 are exposed above. Nakano does not remedy the above-identified deficiencies of Endo with regard to claim 12, and, thus, the combination of Endo and Nakano fails to disclose or suggest all of the elements of any of the presently pending claims.

In rejecting claims under 35 U.S.C. 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *In re Fine*, 837 F.2d 1071,1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In doing so, the PTO is expected to make the factual determinations set forth in *Graham v. John Deere Co.*, 383

U.S. 1, 17-18, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reasons must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. *Uniroyal Inc. v. F-Wiley Corp.*, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F2d. 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985); *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the PTO are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

Further, to establish *prima facie* obviousness of a claimed invention, all the claimed limitations must be suggested or taught by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

If the PTO fails to meet this burden, Applicants are entitled to a patent. *In re Glaug*, 62 USPQ2d 1151 (Fed. Cir. 2002). In the present case, discussed in detail below, Applicants respectfully submit the PTO has failed to meet this burden.

Claim 18 depends from claim 17 (which in turn depends from claim 12) and additionally recites, "wherein a predetermined step is 1 dB." Applicants respectfully

submit that the combination of cited references does not disclose or suggest these features.

The Office Action cited Endo as applied to claim 17, but took the position that Endo fails to disclose only "wherein a predetermined step is 1 dB." The Office Action cited Nakano to remedy this deficiency of Endo.

Nakano generally relates to a transmission power control apparatus and method in a mobile communication system. Nakano describes suppressing the transmission power to an absolute necessary minimum level and increasing subscriber capacity by reducing an amount of interference. For example, the transmission power of a first mobile station 1a is controlled such that a difference between a reception CIR at first base station 3a with respect to first mobile station 1a and first base station target CIR becomes smaller, while the transmission power of the second mobile station 1b is controlled such that a difference between a reception CIR at first base station 3a with respect to second mobile station 1b and a second base station target CIR becomes smaller. At column 6, lines 24-40, Nakano does describe adjusting transmission power control, but specifically states the steps are **0.5 dB**, at column 6, line 27 ("at 0.5 dB steps"). One half decibel is clearly not one decibel.

Applicants respectfully submit that, as explained above, Endo does not inherently or otherwise disclose or suggest a predetermined step, and therefore, even if Nakano had disclosed 1 dB steps (as recited in claim 18), one of ordinary skill in the art would not be

motivated to combine Nakano with Endo, because Endo does not describe reducing the transmission power in predetermined steps.

Moreover, Nakano does not remedy the above-described deficiencies of Endo with regard to claims 12 and 17. Accordingly, Applicants respectfully submit that the Office Action's citation of column 6, lines 25-41, column 7, lines 38-43, column 5, lines 13-24, column 8, lines 51-58, column 9, lines 55-60, column 10, lines 31-37, column 1, lines 14-16, and Figure 6 of Nakano, is misplaced because those passages do not address the above-identified deficiencies of Endo, and because there is not proper motivation to combine Nakano with Endo – only hindsight reconstruction in view of Applicants' disclosure. Therefore, Applicants respectfully request that the rejection of claim 18 be withdrawn.

Claim 20 depends from claim 12. The Office Action cited Endo as applied to claim 12, but took the position that Endo fails to disclose only "wherein the predetermined amount for increasing the transmission is 1 or 2 dB."

Nakano is discussed above. Even assuming that Nakano disclosed "wherein the predetermined amount for increasing the transmission is 1 or 2 dB," there is no teaching, motivation, or suggestion to combine Nakano with Endo.

The Office Action took the position that it would have been obvious to combine Endo with Nakano "in order to suppress power to a minimum level while satisfying the required communication quality." However, Nakano discloses that **0.5 dB** steps can be used at column 6, line 27, accordingly, if a minimum level of increase were desired, one

of ordinary skill in the art were to read Nakano, one of ordinary skill in the art would use the 0.5 dB steps, **not 1 or 2 dB** (as recited by claim 20). Accordingly, it is respectfully submitted that there is no teaching motivation or suggestion to combine Endo and Nakano to disclose or suggest all of the elements of claim 20.

Moreover, Nakano does not remedy the above-described deficiencies of Endo with regard to claim 12. Accordingly, Applicants respectfully submit that the Office Action's citation of column 6, lines 25-41, column 7, lines 38-43, column 5, lines 13-24, column 8, lines 51-58, column 9, lines 55-60, column 10, lines 31-37, column 1, lines 14-16, and Figure 6 of Nakano, is misplaced because those passages do not address the above-identified deficiencies of Endo, and because there is not proper motivation to combine Nakano with Endo – only hindsight reconstruction in view of Applicants' disclosure. Therefore, Applicants respectfully request that the rejection of claim 20 be withdrawn.

Claims 21-22 and 25-26 were rejected under 35 U.S.C. 103(a) as being unpatentable over Endo in view of U.S. Patent No. 5,878,329 of Mallinckrodt ("Mallinckrodt"). The Office Action took the position that Endo discloses all the features of the claims, except those related to forward error correction. The Office Action cited Mallinckrodt to remedy the deficiencies of Endo with respect to the features related to forward error correction. Applicants respectfully traverse this rejection.

The Office Action cited Endo as teaching most of the features of claim 21, but cited Mallinckrodt as disclosing "using forward error correction (FEC) in the transmitted

signal; decoding the signal at the receiving end by means of a FEC decoder; and interpreting the corrections made by the FEC decoder as pseudo errors."

Endo is discussed above. Mallinckrodt generally relates to power control of an integrated cellular communications system. Mallinckrodt describes the power controlled by monitoring the bit error rate and the signal-to-noise ratio. Mallinckrodt describes controlling the power output levels of transmitters to a minimum necessary for satisfactory communications. Each transmission includes a code representative of the transmitter output level. The receivers compare this code to the received signal strength and adjust their associated transmitter power output levels accordingly. The bit error rate and the signal-to-noise ratio are monitored by receivers to develop a measure of signal quality.

Claim 21 is dependent on claim 12, and additionally recites, among other things, "interpreting the corrections made by the FEC decoder as pseudo errors." As explained above, Endo fails to disclose or suggest any treatment of pseudo errors. Mallinckrodt fails to remedy the deficiencies of Endo.

The Office Action cited the abstract, column 9, lines 7-41, column 11, lines 1-21, column 12, lines 30-35, Figure 7, and Figure 9 of Mallinckrodt, as disclosing this feature. None of those passages, however, discuss interpreting **anything** as a pseudo error. Indeed, those passages do not even mention pseudo errors. In direct contrast, the places where those passages that mention any kind of error refer to actual error. *See*, column 11, line 8 ("actual error rate").

Thus, Applicants respectfully submit that Mallinckrodt does not remedy the deficiencies of Endo with respect to claim 21. Therefore, Applicants respectfully request that the rejection of claim 21 be withdrawn.

Claim 22 is also dependent on claim 12, and additionally recites, among other things, "using at the receiving end a demodulator provided with a first set of thresholds for making a decision on a received symbol and a second set of thresholds for making **a decision on whether the pseudo error has occurred**." As discussed above, neither Endo nor Mallinckrodt discusses any processing of any kind, including making any decisions regarding pseudo errors, but rather the references deal only with actual errors.

Thus, Applicants respectfully submit that Mallinckrodt does not remedy the deficiencies of Endo with respect to claim 22. Accordingly, Applicants respectfully submit that the Office Action's citation of elements 101, 152, and 202, column 11, line 49 to column 12, line 40, column 13, line 57 to column 14, line 8, column 9, lines 35-38 and 50-56, column 12, lines 20-35, column 13, lines 33-40, as well as Figure 1, Figure 2, and Figure 7 of Mallinckrodt, is misplaced because those portions do not disclose or suggest anything having to do with a pseudo error, much less what is claimed, namely, "using at the receiving end a demodulator provided with a first set of thresholds for making a decision on a received symbol and a second set of thresholds for making a decision on whether the pseudo error has occurred." Therefore, Applicants respectfully request that the rejection of claim 22 be withdrawn.

Claim 25 is dependent on claim 24, and additionally recites, among other things, "wherein said first means include a **FEC decoder** for decoding a FEC coded signal and **for detecting pseudo errors**." As discussed above, neither Endo nor Mallinckrodt discusses any processing of any kind, including detecting pseudo errors, but rather the references deal only with actual errors.

Therefore, Applicants respectfully submit that Mallinckrodt does not remedy the deficiencies of Endo with respect to claim 25. Accordingly, Applicants respectfully submit that the Office Action's citation of elements 102, 156, and 201, the abstract, column 11, line 10 to column 12, line 3, column 9, lines 7-41, column 11, lines 1-21, column 12, lines 20-35, column 13, lines 33-40, as well as Figure 1, Figure 2, Figure 7, and Figure 9 of Mallinckrodt, is misplaced because those portions do not disclose or suggest anything having to do with a pseudo error, much less what is claimed, namely, "wherein said first means include a FEC decoder for decoding a FEC coded signal and for detecting pseudo errors." Therefore, Applicants respectfully request that the rejection of claim 25 be withdrawn.

Claim 26 is also dependent on claim 24, and additionally recites, among other things, "wherein said first means include a demodulator provided with a first set of thresholds for making a decision on a received symbol and a second set of thresholds for making **a decision on whether the pseudo error has occurred**." As discussed above, neither Endo nor Mallinckrodt discusses any processing of any kind, including making

any decisions regarding pseudo errors, but rather the references deal only with actual errors.

Thus, Applicants respectfully submit that Mallinckrodt does not remedy the deficiencies of Endo with respect to claim 26. Accordingly, Applicants respectfully submit that the Office Action's citation of elements 101, 152, and 202, column 11, line 49 to column 12, line 40, column 13, line 57 to column 14, line 8, column 9, lines 35-38 and 50-56, column 12, lines 20-35, column 13, lines 33-40, as well as Figure 1, Figure 2, and Figure 7 of Mallinckrodt, is misplaced because those portions do not disclose or suggest anything having to do with a pseudo error, much less what is claimed, namely, "wherein said first means include a demodulator provided with a first set of thresholds for making a decision on a received symbol and a second set of thresholds for making a decision on whether the pseudo error has occurred." Therefore, Applicants respectfully request that the rejection of claim 26 be withdrawn.

Claim 35 was rejected under 35 U.S.C. 103(a) as being unpatentable over Endo in view of U.S. Patent No. 5,822,318 of Tiedemann ("Tiedemann"). The Office Action took the position that Endo discloses all of the features of claim 35 except "a first output for outputting a corrected bit stream, wherein the corrected bit stream is obtained by removing a redundancy from a received bit stream; and a second output for outputting an error signal indicating corrections made by the forward error correction decoder to obtain the corrected bit stream." The Office Action cited Tiedemann, and specifically column 6, lines 59-61, column 7, lines 7-9, 23-29, and 40-54, column 5, lines 35-39, and Figure 3 as

disclosing these features, to remedy these deficiencies of Endo. Applicants respectfully traverse this rejection.

Endo is discussed above. Tiedemann generally relates to a method and apparatus for controlling power in a variable rate communication system. Tiedemann describes providing for a closed loop power control method. A first remote station controls the transmission power of a second remote station by transmitting a rate dependent power control signal to the second remote communication station. Because only the second communication knows its transmission rate a priori, it determines its course of action in accordance with both the received power control signal and the knowledge of its transmission rate. Forward error correction decoder 44 of Tiedemann determines an indication of error rate and provides a signal indicative of the error rate to control processor 46. Tiedemann also describes a decoder 56 that has two outputs. Decoder 56 separates two transmitted signals from received data where a second output is for outputting a second signal encoded in the transmission at a transmitting end.

Claim 35 recites, among other things, "a second output configured to output an error signal indicating corrections made by the forward error correction decoder to obtain the corrected bit stream." What the Office Action cited as corresponding to this feature is the signal that the decoder 44 sends, which indicates the error rate to the control processor 46, and the two signals (power control signal and traffic data signal) that decoder 56 separates.

However, neither of those decoders (44 or 56) is an output configured to output an error signal that indicates "corrections made by the forward error correction decoder to obtain the corrected bit stream." In the case of decoder 44, what is output is a frame error rate, not an indication of corrections made, as can be seen at column 6, lines 59-61. In the case of decoder 56, what is output is traffic data and a power control signal as can be seen in Figure 3 and at column 7, lines 23-29. Specifically, nowhere does Tiedemann disclose or suggest providing an error signal indicating "corrections made by the forward error correction decoder to obtain the corrected bit stream." Accordingly, Tiedemann does not remedy the admitted deficiencies of Endo.

Moreover, claim 35 also recites "the control signal indicating whether pseudo errors are detected in the received signal." As explained above, Endo does not disclose or suggest any processing of pseudo errors, including any detection of them. Tiedemann also is silent as to the detection or other processing of pseudo errors. Accordingly, Tiedemann also fails to remedy this further deficiency of Endo. Thus, Applicants respectfully request that the rejection of claim 35 be reversed.

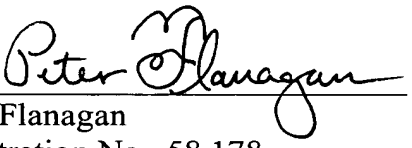
For the reasons explained above it is respectfully submitted that each of claims 12-37 recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 12-37 be allowed, and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by

telephone, Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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